

**CONVERTING PROPYLENE IN AN OXYGENATE-CONTAMINATED
PROPYLENE STREAM TO NON-POLYMERIZATION
DERIVATIVE PRODUCTS**

ABSTRACT

The invention provides for directing an oxygenate-contaminated propylene-containing stream derived from an oxygenate to olefin reaction system to a derivative non-polymerization reactor for conversion of the propylene to one or more derivative non-polymerization products. Exemplary derivative non-polymerization propylene conversion processes include: oxidation to form acrolein, oxidation to form acrylic acid, ammoxidation to form acrylonitrile, liquid phase oxidation to form acetone, liquid phase hydration to form isopropanol, hydroformylation to form n-butyraldehyde and its subsequent aldol/hydrogenation to form 2-ethylhexanol, direct or indirect oxidation to form propylene oxide, alkylation to form cumene in the presence of phosphoric acid/Kieselguhr or a zeolite and the subsequent selective hydroperoxidation of cumene to form acetone and phenol.